THE NEED FOR INDUSTRIAL EDUCATION FOR NEGROES IN THE STATE OF OKLAHOMA

By

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H. L. P.

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CHAPTER I

SCOPE AND PURPOSE OF THE STUDY

Industrial education is much older than the industrial revolution, the factory method of production and the development of big business. "In unorganized form it is practically as old as the human race; it has an ancestry of at least five hundred years."[1] Foraging for food, securing adequate shelter and the making of clothes were difficult problems in early times. They were solved by some of the tribesmen, who in turn taught the techniques and methods to those who had not learned the process. Thus, these instructors initiated the earliest form of industrial education.

In America, industrial education evolved as a practical and economical means of aiding the children of ex-slaves in preparing them for economic independence. More and more, as America takes her rightful place as a leader in the world society, with a highly industrialized and specialized culture, people are forced to accept the fruition that training or experience, or both, are necessities in most jobs that once were available without requiring either.

In the state of Oklahoma experiences in industrial education are provided for Negro pupils in fifty of the sixty-six high schools. In the high school this phase of industrial education is known as industrial arts and in most cases

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[1] F. Theodore Struck, Foundations of Industrial Education, page 1.

is limited to a six-hour per week course in woodwork.[2] In 1944 Charles A. Prosser presented a resolution to members of the Office of Education and Vocational Education which pointed out that the high school curriculum is designed to prepare students for college. However, only about twenty per cent enter college. The vocational schools meet the needs of another twenty per cent leaving sixty per cent inadequately prepared for life adjustment. There is a technical training school at Okmulgee, Oklahoma that provides training for white pupils in this sixty per cent category. Although a few Negroes attend this school there is no such school where attendance is predominately Negro. The need for such a school furnishes the basis for this study.

Origin of the Study. Prior to entering Oklahoma Agricultural and Mechanical College, the writer spent twenty-nine months as an instructor in a vocational school in Dallas, Texas with an approximate enrollment of 800 pupils. The writer had the opportunity to talk with many of the students concerning their employment and how they were able to apply knowledge and skills learned in school to their present occupations. During a conference with Dr. DeWitt Hunt, Head of the School of Industrial Arts Education and Engineering Shopwork, Oklahoma Agricultural and Mechanical College, it was suggested that a study be made of the need for a school that

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[2]Phail Wynn, A Survey of the Industrial Arts Programs In the Separate Schools of Oklahoma and A Proposed Program For These Schools.

will aid Negro students who will not go to college or vocational schools to prepare for some type of industrial work.

Techniques Employed. The first method of securing information was to write to organizations such as the United States Bureau of Census, Washington D. C.; Office of Education, Federal Security Agency, Washington D. C.; Chambers of Commerce; and the State Board of Education on Negro Statistics. The second method of securing needed information was the questionnaire method. This method served two purposes: (1) to identify the writer who had visited many places, and (2) to secure data on the attitude of potential employers toward the establishment of an Industrial Education school for Negroes in the state of Oklahoma. Extensive library research has been pursued. However, as previously stated, much information upon which this study is based came from the data collected through the questionnaires and letters sent. Whenever possible, personal interviews and conferences were arranged.

Purpose of the Study. The purpose of this study is to use material gathered as a basis to justify the need for a school devoted to industrial education for Negroes in the state of Oklahoma and to propose a program for this school. This program may include students who have finished high school and students who have dropped out of school before finishing. It concerns people who desire "on the job training," who are satisfied with their present jobs, but are anxious to receive training to equip them to operate more efficiently, thereby providing them with greater security. The

program is not concerned with emphasizing diplomas or degrees but primarily for industrial education in the fields that are not provided for by vocational education.

Another attempt was made to obtain all the statistics on Negro population, employment and migration in the state of Oklahoma; and to reach at least 100 places in the state of Oklahoma in which a program of this nature would be beneficial. An attempt was made to secure the potential employer's attitude on this type of program. It is proposed in this study to present factual information concerning the need for industrial education for Negroes in the state of Oklahoma and to propose a program for a school that will provide training for those persons who desire training in the line of work in which they are most likely to seek employment.

Definitions of Terms Used. In order for the reader and even for the person producing the report to have a consistent understanding of words and phrases that recur frequently in this study, certain and definite meaning should be ascribed to them. In most cases quoted definitions are offered and these definitions express the meaning of the words used which will apply to them throughout the thesis. Some terms and their definitions as used in this thesis are as follows:

Technical Workers. Workers whose task it is to design, control and inspect products and processes.[3]

Skilled Tradesmen. Workers whose task it is to execute

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[3]S. Grant Conner, Introduction to Vocational Education, page 123.

the plans and operate the machines of production, service and maintenance.[4]

Operator. A highly skilled worker in a limited range of machine or assembly line work.[5]

Curriculum. Curriculum may be thought of as a series of integrated subjects, each of which should have a well-organized course of study.[6]

Reviews of Similar Studies. In 1940 Grissom[7] made a study of the occupational opportunities for vocational education for Negroes in the state of Oklahoma. In this study he presented data concerning the occupational distribution of vocational courses offered, the occupational distribution, facilities for vocational training and the lack of guidance for Negroes in the state of Oklahoma. In the study made by Grissom suggestions were made to improve the vocational status of the Negro vocational schools. However, no plan was proposed for a school program.

Another study was made by Phail Wynn[8] on the industrial arts programs in the separate schools in Oklahoma. The objectives of this study are different because there was proposed

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[4]Conner, loc. cit.

[5]Loc. cit.

[6]John F. Friese, Course Making in Industrial Education, page 191.

[7]Thomas William Grissom, Occupational Opportunities and Vocational Education for Negroes in Oklahoma.

[8]Wynn, op. cit.

a program for industrial arts as a phase of general education.

Expected Outcomes and Uses of Results. The results obtained from this study should be useful to all citizens in the state of Oklahoma, especially to Negro youth, inasmuch as it proposes to discuss attitudes of employers and potential employers toward Negro employees. This study proposes to review the literature and investigate the labor conditions for Negroes in the state of Oklahoma. It is predicted that most Negroes are denied employment due to the lack of experience or training for the job rather than discrimination because of race, creed or religion. The data obtained in this study are expected to prove most helpful in pointing out the need and in proposing a program for establishing an industrial education school for Negroes in the state of Oklahoma.

Summary. Based upon the findings of the questionnaires returned, personal experience and an intensive survey of textbooks in shopwork courses, this study proposes to show the need for a program for industrial education. In this chapter, the writer has indicated the reasons for undertaking this study, the apparent need, expected outcomes, origin and methods of investigation. Definitions of related terms have been defined as interpreted in this study. In the following chapter a brief history of the development of Negro labor will be presented.

CHAPTER II

DEVELOPMENT OF NEGRO LABOR IN AMERICA

One cannot scan the pages of history which reveal the birth and growth of the southern states of America without realizing the economic role the Negro played in determining that history. As one visualizes the fields of cotton, the rolling hills of staples that created the "southern empire," the labor of Negroes, slave or free, is embedded in the soil. The Negro planted and harvested, and also contributed to the skilled and semi-skilled labor which the economic life of the south demanded.

> Among this group of skilled laborers there were the carpenters, the wheelwright, the mason, the bricklayer, the plasterer, the painter, the tanner, the miller, the weaver, the shoemaker, the blacksmith, the harnessmaker, the cooper and others.[1]

Slavery and Industrialism. One of the most critical periods in the development of American sectionalism was during the period in which the 1850 Compromise was operative. The South had flourished and grown wealthy under the established plantation economy. The domestic system established by the whites, of paternal care toward these human machines called "slaves", had sufficiently justified the maintenance of slavery in the hearts and minds of the southern white man. The North held that slavery deprived the nation of "good intelligent citizens." Wesley said, "when slaves and groups are depressed by a master class, the results are always

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[1]Charles Wesley, Negro Labor in the United States, page 3.

petty vices - thievery, discontent, rioting, runaway and indifference."[2] History had proven the results of the slave system unsatisfactory, whether among Greeks, Romans, Germans, Anglo-Saxons, or Africans. Wesley states in this manner:

> When it was difficult for slaves to be free or to hope to be free, or for the early apprentice to become journeymen and masters, the permanent subordination became irksome and the worker soon lost the efficiency which his group may have once possessed and degenerated into a machine operating at the master's command.[3]

This condition was especially true among slaves and groups who were in competition with the southern masters often proved to be instrumental in aggravating the above situation.

Post-Civil War Industrial Education. The economic problems that arose immediately after the Civil War for the freed Negro were many. He was like a child, torn from the breast of a mother, and sent out to make his way when he had not yet passed the weaning stage. Unfortunately, only a few Negroes had even learned to read and write, and the ones who had worked the soil and served as semi-skilled and skilled laborers, felt lost and inadequate away from the familiarity of the "plantation" that had "sheltered him from the storms of life."

Negroes were forced to protest and to petition the state legislature and the northern army officials that equal opportunities for labor be given them. The "Freedmen's Aid Societies" sent teachers and missionaries among the freedmen. This

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[2] Ibid., page 2.

[3] Ibid., page 5.

society established schools, and in 1865, there were 90 schools, and 195 teachers maintained by the Freedmen's Bureau. By 1866 this number had grown to 493 schools in the southern states that were being maintained by various state branches of the American Freedmen's Union Commission.[4] The prevailing philosophy of the education of the freedmen was that education and labor should be hand in hand and through this type of education the laborer would receive better wages and the employer would have a better worker.

The women were not neglected in the "trial," to help the freedman adjust. By 1867 twenty-five industrial education schools were planned to assist the female workers in garment making and in repairing clothing. These schools were for the working class of people and their parents paid tuition fees from $1.00 to $1.50 per month.[5] These industrial education schools were the forerunners of the industrial education schools of the present time.

Industrialism Succeeds the Domestic System. Between 1870 and 1890, the South began to undergo an economic change. It began to grow industrial and in a sense, the South's agricultural prestige began to diminish. These new conditions made new demands upon the worker. The Negro was familiar with the crude processes of labor, but he was unacquainted with the demands which were made upon labor by machinery and modern in-

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[4]Lorenzo J. Green and Carter G. Woodson, The Negro Wage Earner, page 25.

[5]Ibid., page 26.

dustrial development. Some Negroes were accepted as apprentices and worked along with whites. Yet, the lack of training resulted in inefficiency in many places and at most the Negro could only cast his lot among the semi-skilled labor force. It was apparent that something had to be done and done quickly to aid the Negro in adjusting himself to skilled labor conditions, if he was to survive economically. Thus, there arose the industrial schools.

Hampton Institute. Founded after the Civil War, Hampton Institute was the first industrial school for Negroes of any considerable influence. This institution was founded by General Samuel Chapman Armstrong in 1868, who stated his idea in founding this school was:

> To train selected Negro youth who should go out and teach and lead their people, first by example, by getting lands and homes; to give them not a dollar that they could not earn themselves; to teach respect for labor; to replace stupid drudgery with skilled hands and to these ends build up an industrial system for the sake not only of self-support and intelligent labor but also for the sake of character.[6]

The objectives of this school were inspiring to one particular student, Booker T. Washington. He went to Hampton Institute in 1872 and was graduated in 1875.

The Booker T. Washington Era. In 1881, Booker T. Washington became principal of Tuskegee Normal and Industrial Institute where the Washington doctrine of industrial education found expression. Under his leadership, this school became

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[6]Basil Mathews, Booker T. Washington, page 47.

the exponent and Washington the great advocate of industrial education for Negroes.[7]

One of the objectives which Booker T. Washington envisioned for Tuskegee Institute as an educational institution was the development of specific skills in definite crafts and occupations.[8] In public addresses, which he delivered in all parts of the country, he was seeking to bring about the favorable consideration of this type of educational work, to teach the dignity of labor and to create a better understanding between races. This work was very necessary for Negroes were excluded from apprenticeship by the rules of trade unions.[9]

Negro Labor During the World War of 1914. World War I brought on many new opportunities in skilled as well as non-skilled labor for the Negro workmen. They had served as the labor supply in the South but the North had not accepted them in large numbers until the war. The shortage of labor in industry opened jobs and the Negroes moved north and to the Middle West in large numbers to free themselves from the shadow of economic oppression. Karl F. Phillips, Commissioner of Conciliation, who was especially detailed to observe the migration of Negroes, estimated that during these periods

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[7]Benjamin Brawley, A Short History of the Negro, page 165.

[8]Horace Mann Bond, The Education of the Negro in the American Social Order, page 119.

[9]Carter Godwin Woodson, The Negro In Our History, page 441.

there were between 800,000 and 900,000 Negroes who moved north.[10] This movement of Negroes has been continuous but the fact that the World War caused an emergency in which Negro labor was an important source of relief increased this migration. The steel plants, the mills, and the corporations of the North saw the supply at hand and Negro laborers were called to work.

A. BRIEF HISTORY OF THE NEGRO IN OKLAHOMA

Prior to admission to the Union the present state of Oklahoma existed as Oklahoma and Indian territories. These Indians were freed and the United States entered into a new treaty with the Indians. Schools for the Indians date back as far as 1836 but the records for Negro schools before 1907 are incomplete.[11] It is known that the first territorial legislature set aside land for the support of schools. During the period from 1895 to 1905 there were established about 500 schools for whites and Indians and about sixty schools for Negroes.[12]

Geographic Movement of the Negro Population in Oklahoma. The migration of Negroes may be divided into three phases. The first phase was the shift from one rural area to another

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[10]Wesley, op. cit., page 283.

[11]R. H. Wilson, Fourth Biennial Report of State Superintendent of Public Instruction, pages 223-224.

[12]Annual Report of the Department of Interior 1947, page 8.

within the south. The second movement was still within the south but from rural to urban areas. The third phase was a tremendous acceleration of the migration of Negroes from the south to the north and west. The Negro exodus from the south, 1879 - 1882, affected the whole United States.[13] This migration certainly had its effect upon the history of the Negro in Oklahoma.

About 15.9 per cent of Oklahoma's original settlers were from Kansas.[14] After Oklahoma was opened to settlement most of the occupants came from other states. The whites were predominantly from the north while most of the Negroes were from the three bordering states of Kansas, Missouri, and Texas.

In early days a large number of Negroes settled in the Red River counties where there is fertile bottom land. The trend in recent years has been toward urban centers.

Trend Toward Urban Migration. The outstanding trend is for the Negro population in Oklahoma to become more urban. The number of urban areas in which Negroes reside has increased for each decade and the Negro population in most of the urban areas has grown steadily as indicated by Table I. The Negro population increased from 137,612 in 1910 to 168, 849 in 1940. There was an increase for each decade until after which there was a small decrease. As indicated

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[13]Brawley, op. cit., page 129.

[14]Nathaniel Jason Washington, Historical Development of the Negro in Oklahoma, page 37.

in Table I, only 26.9 per cent of the Negro population was urban in the state of Oklahoma in 1910 as compared to 47.2

TABLE I

RURAL-URBAN DISTRIBUTION OF NEGRO POPULATION OF OKLAHOMA:[15] 1910-1940

Area	1940 Number	1930 Number	1920 Number	1910 Number
Urban	79,696	67,801	47,904	36,982
Rural-Non-Farm	30,276	24,883	23,499	*
Rural-Farm	58,877	79,514	78,005	100,630
Total	168,849	172,198	149,408	137,612

percent in 1940. The greatest increase was during the decade from 1920-1930. The population is scattered in urban areas throughout the state but the greatest concentrations are in Oklahoma City and Tulsa where twenty per cent of the Negro population resides.

Racial Composition of Oklahoma Population. The state of Oklahoma is inhabited by persons from many racial groups. The three races (native white - Negro - Indian) are in majority. There is a tendency for the state to become more biracial in nature. This tendency is indicated by the fact

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[15] United States Census Bureau, 1940.

*Rural-Farm and Rural-Non-Farm are not separated for 1910.

that the Indian population decreased from 24.0 per cent of the total population in 1890 to 2.7 per cent of the same in 1940. The percentage of native white has increased steadily, while that for the Negro has remained constant. The largest increases of the Negro population were found during the pre-statehood period and immediately after statehood. However, the percentage of the Negro population compared to the total population has changed very little since 1890.[16]

Distribution by Counties. Negroes have resided in each of the seventy-seven counties in the state at sometime since 1910, although a few of the counties were without a Negro for each of the decades. In 1940, for instance, five counties had no Negro population (Woods, Cimmarron, Ellis, Harper and Texas). More than fifty per cent of the Negro Population has been concentrated in ten counties (Oklahoma, Tulsa, Muskogee, Okmulgee, McCurtain, Seminole, Creek, Okfuskee, Logan, and Wagoner).[17]

Comparison of Statistics Relative to Employment of Negroes In 1940. A study of the distribution of the Negro population employment may throw some light on trends in the major occupation groups. Table II shows this distribution of the total employment of white, Negro and other races for 1940. The intention is to assist the reader in understanding the employment situation of Negroes in Oklahoma with the hope that the

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[16] Ibid.

[17] Ibid.

TABLE II

GAINFULLY EMPLOYED PERSONS IN OKLAHOMA: 1940[18]

OCCUPATION	MALE				FEMALE			
	Total	White	Negro	Other	Total	White	Negro	Other
Employed (except emergency work)	530,123	491,563	29,826	8,734	128,616	111,068	16,026	1,522
Professional & Semi-professional	29,214	27,719	1,244	251	22,432	20,831	1,358	243
Farmers and Farm managers. . . .	153,246	141,317	8,145	3,784	3,147	2,788	251	108
Officials, except foremen. . . .	55,242	54,288	660	294	8,099	7,766	274	59
Clerical and sales	54,832	54,140	329	363	37,069	36,313	221	232
Craftsmen and foremen.	56,719	55,226	1,008	485	714	682	27	5
Operatives and kindred	61,955	59,443	1,966	546	7,495	7,116	283	96
Domestic Service	2,089	673	1,387	29	26,188	14,585	11,231	372
Protective Service	9,134	8,812	247	75	32	31	1	
Farm laborers and foremen. . . .	57,382	50,502	5,095	1,785	2,275	985	226	64
Laborers, except mine and farm .	27,178	23,118	3,203	857	538	499	33	6
Other Service workers.	18,995	12,539	6,285	171	18,394	16,200	1,907	287
Occupations not reported	4,137	3,786	257	94	2,233	1,969	214	50

[18]United States Department of Commerce, Sixteenth Census of United States: 1940, Population, pages 882-886.

situation, when understood, will contribute to a better understanding of the need for an industrial education school on the part of the Negro population of the state.

The table shows the major occupations engaged in by workers in Oklahoma in 1940. The relatively large number of the Negro workers who are in unskilled fields, such as farm laborers, other laborers, janitors and porters, and servants should be noted.

Conclusion. In this chapter the writer has attempted to give a brief industrial history of the development of Negro labor. Current labor migration and industrial educational conditions of Negroes in the state of Oklahoma have been presented. In chapter III, the philosophical aspect of this study will be presented.

CHAPTER III

A STATEMENT OF PHILOSOPHY

Industrial education offers facilities for the training of various groups of people, not job training alone but training toward and training for complete and satisfactory living. It is an accepted agreement among educators that industrial education includes both industrial arts and vocational industrial education. For this reason the philosophies of industrial arts and vocational industrial education will be discussed in this chapter. The writer intends to point out the contributions they are making to a limited number of persons and the need for the establishment of an industrial education school that will meet the needs of many who may not profit by industrial arts or vocational industrial education.

A. DEFINITIONS

Several terms are often confused that are a phase of or closely related to the term industrial education, therefore, these terms will be defines as interpreted in this report.

Education. Many attempts have been made to define the term education. Some of these definitions are in the form of a statement of purposes or aims. In this manner Wilber[1] states that the aims of education are:

(1) To transmit a way of life, (2) to improve and

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[1]Gordon O. Wilber, Industrial Arts in General Education, page 3.

reconstruct that way of life and (3) to meet the needs of individuals.

Struck defined education in a more concrete term. He called it the acquisition of knowledge and skills that are useful for general living.[2]

Prosser and Quigley gave a broad definition of education. They said:

> . . . It wil signify the sum of all experiences which in their results, affect the habits, the thinking and the decision of human beings so that they are able to adapt themselves to their social environment and meet its demand with at least some measure of success.[3]

Prosser and Quigley pointed out tha education has a different meaning for different people. The definition would not be the same for the classicist as it would for the materialist or the scientist.

Life Adjustment Education. The National Commission on Life Adjustment Education for Every Youth is often referred to as the "Commission". The Commission's concept of life adjustment education is as follows:

> Life adjustment education is designed to equip all American youth to life democratically with satisfaction to themselves and profit to society as home members, workers and citizens. It is concerned especially with a sizable proportion of youth of high school age (both in school and out) whose objectives are less well served by our schools than the objectives of preparation for either a skilled occupation or higher education.[4]

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[2] F. Theodore Struck, Vocational Education for a Changing World, page 5.

[3] Charles A. Prosser and Tho. H. Quigley, Vocational Education In a Democracy, page 1.

[4] Harl R. Douglass, Education For Life Adjustment, page 9.

This definition of life adjustment education does not neglect the students who will go to college or the vocational students, however, it is especially interested in those students who will not go to college or vocational schools.

Industrial Arts. Industrial arts is a phase of general education.

> As a school subject industrial arts may be defined as a study of the machines, tools and processes by means of which forces of nature are utilized and the raw materials of nature are changed by man to make them more valuable and pleasing. It leads to an understanding of the native qualities of raw materials and of the natural forces together with a knowledge of the methods and practices of utilizing and changing these materials and forces. It is also concerned with the social and economic problems incident to these changes.[5]

From this definition industrial arts is conceived as an answer to the problem of educating boys and girls to live in a world which may be accurately characterized as industrial and technological.

Vocational Industrial Education. The definition of vocational industrial education according to Friese is: "The preparation for entrance upon and for making progress in 'trades' and industrial occupations of all kinds."[6] Vocational industrial education is planned to aid specialized semiskilled or unit-skilled workers and is often referred to as general vocational education.

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[5] State Board of Education of Oklahoma, The Twenty-Second Biennial Report of the State Department of Education of Oklahoma, 1946-48, page 77.

[6] John F. Friese, Course Making in Industrial Education, page 7.

Vocational Education. This term may apply to instruction at various levels.

> It embraces out-of-school as well as school experiences, as used with reference to federally aided instruction that meets the requirements of the federal acts. Vocational education refers to the experiences that enable one to carry on successfully a socially useful occupation.[7]

Vocational education whether federally reimbursed or not is often thought of as preparation to carry on a gainful occupation.

Industrial Education. Industrial education has been defined by Friese as:

> A generic term including all education activities concerned with modern industry, its raw materials, products, machines, personnel and problems. It therefore includes both industrial arts, the general education forerunner of or introduction to vocational industrial education.[8]

This definition points out that industrial education includes industrial arts which is accepted as a phase of general education and vocational education which is conceived to be preparation for gainful employment.

B. PHILOSOPHICAL ASPECT

The purpose of industrial education in a democratic society is to provide an opportunity for all of the people to develop to their fullest potentialities. It has been proven that the present school programs are meeting the needs of approximately forty percent of the people. In 1945, Charles

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[7] Struck, op. cit., page 6.

[8] Friese, op. cit., page 12.

A. Prosser presented a resolution to members in the Division of Secondary and Vocational Education pointing out that the needs of sixty percent of the American youth are not being met adequately in the present school program.

Democracy and Education. A democratic nation must have democratic schools in order to transmit this way of life to coming generations. Since the present programs are not properly caring for sixty per cent of the school's population, the writer believes that education could be made more democratic by establishing schools that would meet the needs of the neglected groups.

> Education is made more democratic when it renders a new and needed educational service to a neglected group of citizens or when it improves an old service to any group or when it reduces the cost of any service so as to make it available to them. Most democratizing must be done through public supported institutions.[9]

Education was made more democratic during the decade of 1880-1890 with the origin of industrial arts under the name of manual training. It was also made more democratic by the passing of the Smith-Hughes Act in 1917 and again in 1945, this democratic trend was realized with the origin of Life Adjustment Education Program.

Philosophy and Objectives of Industrial Arts. Industrial arts is a phase of general education. Friese made a statement of philosophy of industrial arts as follows:

> Learning and developmental experiences in industrial arts, through types of experiences not otherwise

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[9]Charles A. Prosser and Tho. H. Quigley, op. cit., page 285

> available, are essential in the complete social education of every boy in a dominantly industrial democracy.[10]

The philosophy of industrial arts is often revealed by its objectives. Like any other division within the public school curriculum each contributes to the objectives of general education but there are some objectives that may be accomplished better in one division than in any other. The specific objectives of industrial arts are as follows:

1. To develop recreational and vocational activity.
2. To increase appreciation for craftsmanship and design.
3. To increase consumer knowledge.
4. To provide experiences which help in choice of vocations.
5. To encourage creative expression.
6. To develop a certain amount of skill in a number of basic industrial processes.[11]

Industrial arts is no longer considered as the ideal place for boys who are poor in academic subjects but is accepted as a phase of general education and probably contributes more to the development of safety habits than any other course.

Philosophy of Vocational Industrial Education. Federally aided preparatory, vocational industrial education is a joint federal, state and local enterprise, with each civic unit having interests, priviliges and responsibilities.

> Preparatory vocational industrial education should provide training for the needs of the vast numbers of youth, both boys and girls, who enter the semiskilled

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[10] Friese, op. cit., page 58.

[11] Gordon O. Wilber, op. cit., page 42-43.

> operating, assembling and service jobs in industry, transportation, and communication, as well as for those jobs classified as 'skilled trades'.[12]

All vocational courses are not federally aided but the concept of such programs is to provide people for gainful employment.

The Philosophy Applying to General Industrial Education. A type of general industrial education is demanding attention and recognition. This was pointed out in the Smith-Hughes Act when provisions were made for the establishing of general industrial courses in cities under 25,000 inhabitants. The objectives of general industrial education as listed by Friese are:

1. To develop in each pupil a skill and ease in doing the wide variety of semiskilled operations essential to the upkeep of industrial plants and factories.
2. To develop versatility in handling tools and meeting problems where minimum trade skills are required.
3. To develop interest, confidence, and pride in each student and to direct him into some socially worthwhile occupation with confidence of success.
4. To fit for useful and profitable employment and to aid in the initial placement of such trainees into industrial life.[13]

General industrial education also contributes to the development of good work habits, and social attitudes.

Education for Life Adjustment. As previously stated in this paper education for life adjustment is recognition on the part of educational leaders to make education more democratic. It originated from a resolution presented by Charles

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[12] Friese, op. cit., page 68

[13] Ibid, page 221.

A. Prosser on June 1, 1945 at Wardman Park Hotel in Washington D. C. In the next year five regional conferences were held throughout the United States which were followed by a national conference in Chicago, Illinois on May 8, 1947. At this conference John W. Studebaker, then Commissioner of education, appointed members from nine national organizations to form the national commission on life adjustment education for every youth. The Commission proposed to cooperate with state departments of education, with teacher institutions and with professional associations in helping schools to develop plans to educate students for life.

C. THE APPLICATION OF THIS PHILOSOPHY

In this state a program designed to achieve the objectives discussed for general industrial education would be of immeasurable value. At the present time there is no such school for Negroes in the state of Oklahoma.

The Need of Industrial Education for Negroes in the State of Oklahoma. The only industrial training offered for Negroes in the state of Oklahoma is in industrial arts and a limited number of vocational courses offered in the separate schools. The industrial arts program in the separate school is so limited that there is little chance to offer a wide range of selectivity in the occupational skills.[14]

Charles Otis Stout made a study comparing the five largest vocational schools for whites with the five largest for

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[14]Phail Wynn, A Survey of the Industrial Arts Programs In the Separate Schools of Oklahoma and A Proposed Program For These Schools, page 15.

Negroes. He found that white vocational school students in Oklahoma have greater opportunity for employment in the specific vocations for which they have taken training than do Negro students.[15]

Objectives of Industrial Education for Negroes in the State of Oklahoma. In addition to the objectives previously designated for general industrial education, there are others that would prove most helpful for industrial education for Negroes in the state of Oklahoma. These objectives should be as follows: (1) to keep pace with changing community and industrial needs and to translate them into a comprehensive program of shop instruction; (2) to take advantage of all possible means to provide actual job experiences for the students without exploiting the students.

Conclusion. The purpose of this chapter has been to give a philosophy of industrial education and the need for this type of education for life adjustment. A philosophy of industrial arts and vocational education has been discussed because they are considered a phase of industrial education and the only type of industrial education available to most Negroes in the state of Oklahoma at the present time.

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[15]Charles Otis Stout, A Comparison Between Vocational Offerings and Job Placement in Five Vocational Schools for Negroes and Five Vocational Schools for Whites in Oklahoma, page 285.

CHAPTER IV

THE SURVEY

Before a program could be planned and the need determined for establishing an industrial school for Negroes in the state of Oklahoma, it was necessary to obtain certain information from potential employers. To obtain this information the questionnaire approach was used. A one page questionnaire and a letter to explain the purpose of the study were prepared. The length of the questionnaire and questions were limited in order not to consume too much time of the person answering them. For mailing, the questionnaire and letter of accompaniment were reproduced on the multilith machine.

Delimitations of the Questionnaire. Items concering labor unions, fair employment practices and questions of political nature were excluded from the questionnaire because the writer felt that the purpose for asking such questions might easily be misinterpreted. It was also believed that by omitting the above items a larger number of questionnaires would be more completely filled out and returned. In order to obtain the honest opinion of the employers for this study, no space was provided for the name of the company. Because the replies were anonymous there was no need for hesitance on the part of the employer in answering the questions for fear the information could jeopardize their business.

Distribution of the Questionnaire. Prior to the reproduction of the questionnaire the writer visited a number of

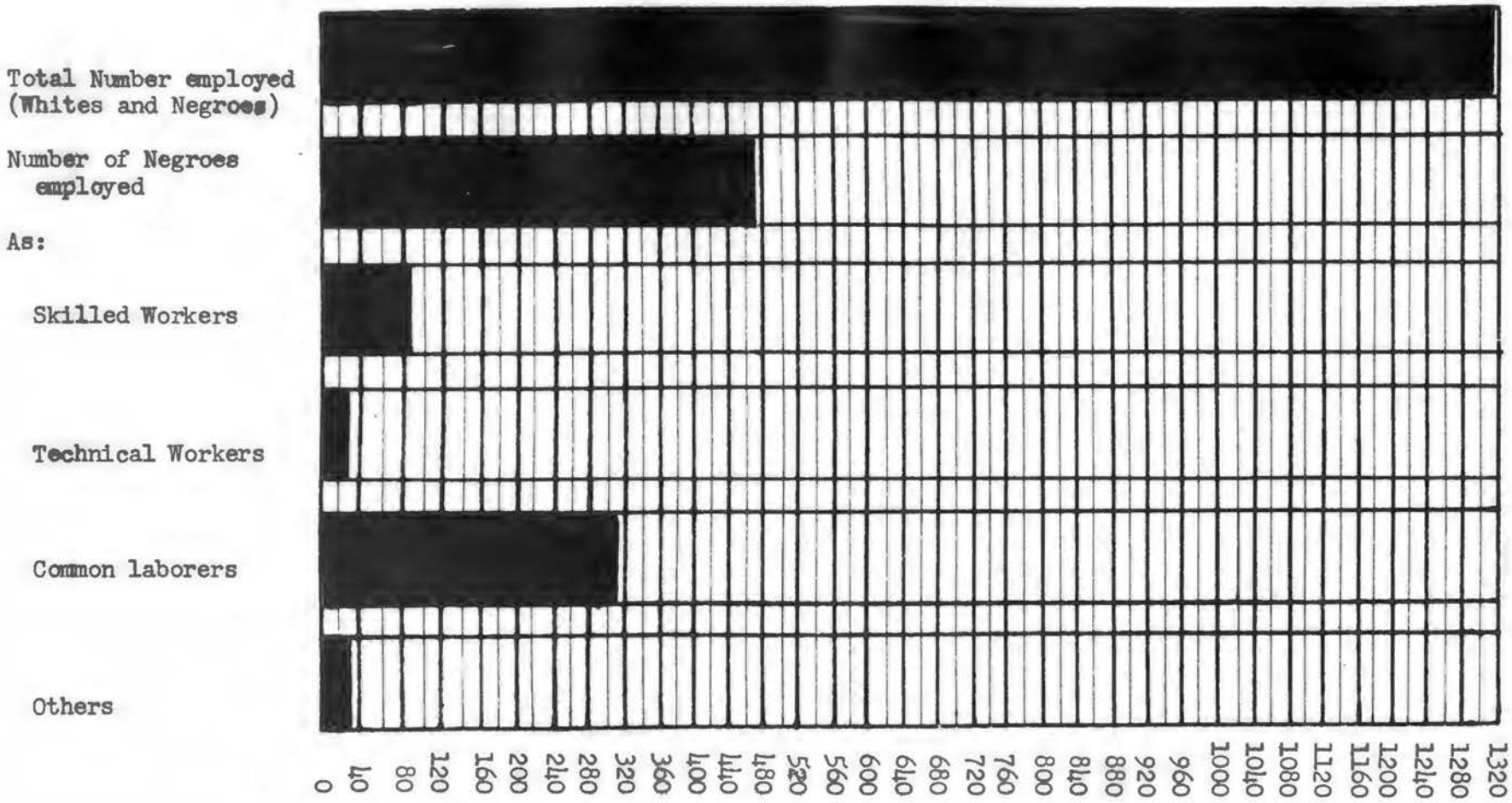
places in the state of Oklahoma discussing the need for an industrial education school with proprietors, foremen, supervisors, managers and employers many of whom expressed their interest and willingness to participate in a study of this nature. A number of telephone directories were obtained from different cities from which a number of business places were selected to send the questionnaires. The questionnaire along with the letter of accompaniment, a copy of which may be found in Appendix B of this report, was mailed to sixty places throughout the state of Oklahoma. Approximately forty questionnaires were distributed during personal interviews some of which were answered during the interview and others were left to be mailed later.

The Questionnaire. The purpose of this questionnaire was to determine the industrial jobs in which most Negroes are employed in the state of Oklahoma. The questionnaire consisted of eleven questions. The general nature of the questions centered around the number of Negroes employed, kind of workers, method of obtaining job, form of training given to employees to qualify for the job, attitude of employers and potential employers toward Negro workers, type of training the employers preferred for Negro employees and the attitude of employers toward the establishment of an industrial education school for Negroes in the state of Oklahoma.

Gainful Employment of Negroes in the State of Oklahoma. Approximately sixty-four of the 100 questionnaires distri-

TABLE III

TOTAL NUMBER OF GAINFULLY EMPLOYED PERSONS AND CLASSIFICATION OF NEGRO EMPLOYEES IN THE STATE OF OKLAHOMA AS INDICATED BY THE RETURN OF SIXTY-FOUR QUESTIONNAIRES, 1951



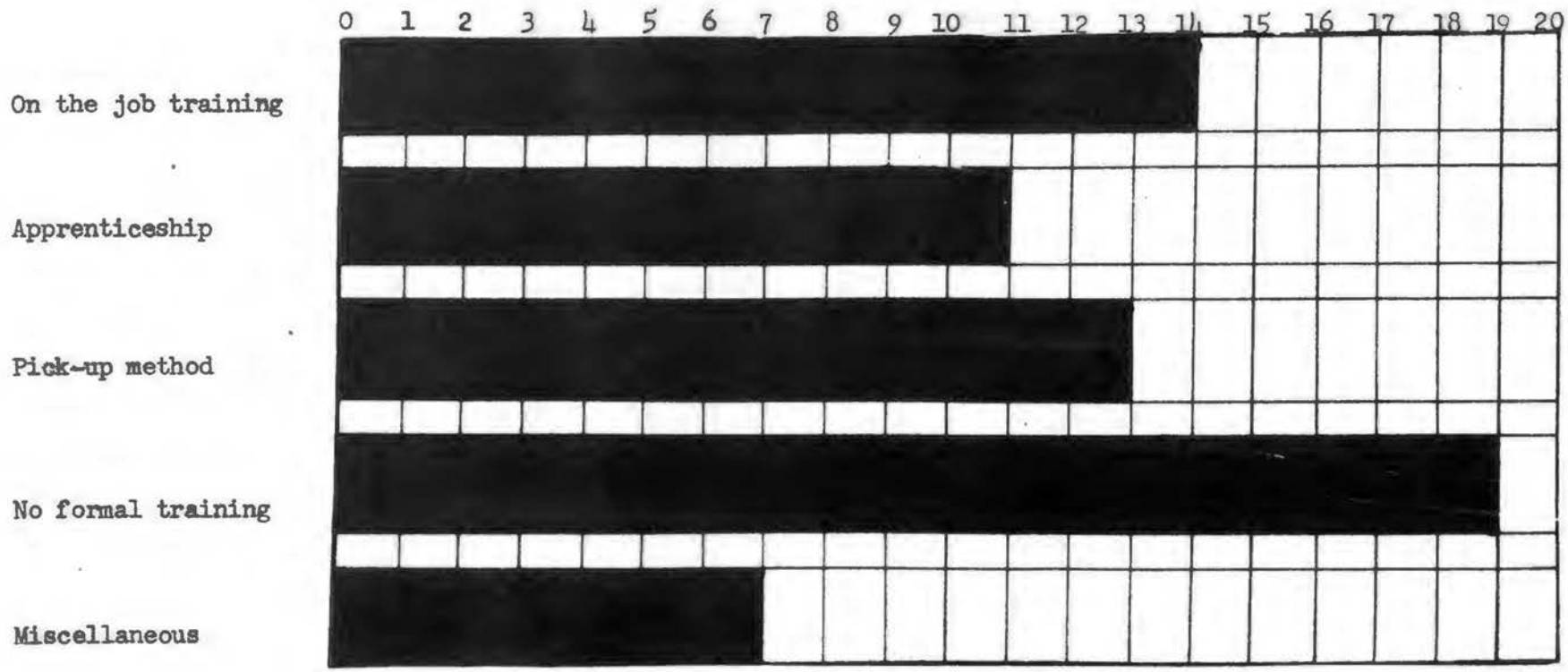
buted were returned. As indicated in Table III, 473 or 34.8 per cent of the persons employed in the various industrial establishments to which the questionnaires were sent, were Negroes. Out of this number 95 or 20.0 per cent of the Negro workers were classified as skilled workers, 31 or 6.5 per cent as technical workers, 314 or 66.4 per cent as common laborers and the remaining 33 or 6.9 per cent were not classified.

Method of Obtaining Employment. Twelve of the establishments in the survey use some form of application blank for potential employees. Forty-nine stated they use no form of application blanks and three did not answer the question. Some of the persons who stated they used no form of application blank did remark that they require persons seeking employment to report for an interview before they were hired.

Methods of Training New Employees. "Do you have any form of training for your employees?" To this question thirty-four said "yes", twenty-six said "no", and six did not answer. Of the thirty-four who provide some type of training for their employees, there was only a slight difference in the number who used the various methods as indicated in Table IV. There is some doubt as to whether or not the employers fully understand the terms "on the job training","apprenticeship" and "pick-up-method" because the writer checked with the state Chamber of Commerce and found there is no record of Negroes serving an apprenticeship in the state of Oklahoma.

TABLE IV

METHODS OF TRAINING NEW EMPLOYEES IN THE SIXTY-FOUR INDUSTRIAL ESTABLISHMENTS REPORTING



School Training Desired for Employees. To the question "Do you think Negroes need a training program in mechanical skills?", fifty-eight answered "yes", one "no" and five did not reply. Several of the persons who answered yes to this question made such comments as: "Yes, if they want it;" "Yes, I think it would be alright." A manager of a small business firm who answered no to this question filled out the questionnaire during an interview and stated that he employed two Negroes, one a skilled worker and the other a common laborer. He also said "No school could train a man to do the type of skilled work we do here, he will just have to get his experience on this machine." When asked the question "Would you prefer hiring a new employee who had some formal training in preference to one who had none?", the answer was still "No, I would have to train him anyway." The view point of this manager was overshadowed by many others who approve of some form of industrial education school for Negroes.

Jobs To Which Trained Negroes Would Be Welcomed. Some employers replied to the statement "Name the jobs to which you would welcome the employment of trained Negroes", under such major headings as: auto mechanics, janitorial service, woodwork and others. Table V (B) will give a list of the jobs that employees in the state of Oklahoma would welcome trained Negroes. A few employers stated they would like for their employees to learn management, cooking, typing, responsibility, dependability, honesty and safety.

The jobs to which trained Negroes would be welcomed

varied little from the jobs that the employers said they

TABLE V

(A) JOBS EMPLOYERS WOULD LIKE FOR THEIR EMPLOYEES TO LEARN IN SCHOOL AND (B) JOBS TO WHICH TRAINED NEGROES WOULD BE WELCOMED

JOBS	(A)	(B)
Automobile Mechanics		
General Mechanics	17	10
Washing	18	22
Lubrication	16	21
Brake Repair	5	5
Service Station Attendants	20	18
Body and Fender Repair	10	12
Painting	2	1
Tire Repair	4	11
Truck Driving	1	1
Graphic Arts	1	1
Printing	1	1
Janitor	5	11
Laundry Work		
General	5	1
Dry Cleaning	1	1
Pressing Clothes	3	3
Flat Work	1	1
Pressing Shirts	0	1
Lumber Work		
General	2	2
Storage	2	2
Recognition	1	1
Machine Operators	2	1
Power Tool Operators	2	1
Salesmanship	6	3
Shoe Repair		
General	5	2
Dying	3	7
Polishing	3	8
Upholestry	2	2
Welding	1	1
Woodwork	2	1
General	12	10
Finishing	1	1

would like for the students to learn in school (A), Table V.

Out of the group reporting in this study, only two stated they would not be willing to pay more for the trained employee, fifty-seven would pay more for the trained person and five did not answer the question.

Chances of Employment for the Trained Students. Forty-four employers indicated they would employ more Negroes if they were trained, nine do not and would not employ Negroes, two felt they had all the employees they needed and nine others did not answer the question. It is believed that the employers who failed to answer the question did so because they had all the employees needed at the time but had no objection to hiring trained Negroes.

The Attitude of Employers Toward an Industrial Education School for Negroes in the State of Oklahoma. As previously stated there was no space provided for the name of the industrial establishment from which the questionnaire was received, however, several did give their names on their on accord. Several of the persons who filled out the forms included various comments. Some of these were as follows:

(1) I am happy to inform you I have had very good luck with my employees. My skilled worker has been with me twelve years.

(2) Have no racial prejudice, but have had no experience with Negroes in skilled jobs.

(3) I would not object to hiring Negroes in the skilled and technical jobs if they were taught responsibility, dependability and honesty.

(4) Attitude and skills are my only requirements.

(5) Law requiring separate toilets and drinking fountain facilities makes it difficult for small businesses to em-

ploy Negroes. No personal objections.

(6) I am in full accord with your program of providing better training for Negroes. When this is done I think they will be more generally accepted in industry.

During the personal interviews many inspiring remarks were made by employers and potential employers, such as:

"I am very much in favor with your program."

"It would be a mighty nice thing if there was such a school."

"The answers to many problems confronting Negro laborers could be solved with a school of this nature."

One of the most interesting interviews was held at an oil industry. The writer had sent a questionnaire to this company but had not received an answer. During the interview the person with whom the writer talked said: "This questionnaire has been sent to several departments and no one will fill it out. They read and discuss it, then send it to another department." This company hired twelve Negroes as common laborers but because of customs or traditions the company had never given the idea of employing Negroes as skilled workers any consideration. After the interview the writer felt that the sending of the questionnaire to this firm may create an interest in the employment of Negroes in the skilled and technical jobs available at this particular firm.

Summary. In answer to the questionnaire, sixty-four replies were received. Of these fifty-six answered the questionnaire more or less completely.. Six others answered but left most of the form incomplete.

The number of Negroes employed in any one firm ranged from one to 311. Since the number of employees varied so greatly, it was to be expected that the jobs employers would recommend their employees learn in school would be different.

Having completed the tabulations and interpretation of the data secured by the use of the questionnaire, the writer will undertake to point out and discuss some of the issues involved in establishing an industrial education school for Negroes in the state of Oklahoma.

CHAPTER V

ISSUES INVOLVED IN ESTABLISHING AN INDUSTRIAL EDUCATION SCHOOL FOR NEGROES IN THE STATE OF OKLAHOMA

The previous chapter has pointed out that there is a need for industrial education for Negroes in the state of Oklahoma. There are a number of issues to be considered in meeting this need. Some of the issues to be considered in establishing an industrial school are as follows:

1. What groups of persons are to be served?
2. What should the new organization or program be called?
3. Under what auspices should the new institution be established and operated?
4. In locating this institution should the emphasis be on placing it within commuting distance of the largest possible portion of the state's Negro youth?
5. How should the school be related to trade and vocational schools, elementary and secondary schools?
6. Who will determine what programs or curriculum shall be offered and in what place?
7. What should be the qualifications of the teachers? What degrees should they hold and how much experience should be required?
8. Will the new institution be free to all the youth of the state?
9. How should the new program be financed?

The above issues are not the only problems that should be

taken under consideration in establishing an industrial education school for Negroes in the state of Oklahoma. Other problems pertaining to the destiny of separate schools should be considered but the above issues are the most immediate ones. Therefore, they are discussed with recommendations based on the finding of the writer through research of literature, questionnaires and interviews.

Groups Served. The purpose of this school would be to provide training for students who have dropped out of school or have completed their school training and do not care to go to college or take a vocational course in some special trade. This school could make a contribution to that group that Prosser called the "sixty per cent" in the resolution presented by him to the members of secondary and vocational education in 1945 at Washington D. C. Any person who qualifies under the school laws of the state of Oklahoma should be admitted.

Suggested Name for the New Organization or Program. This program could be referred to as "Industrial Education For Life Adjustment." This name seems appropriate because this program is interested in preparing students in the type of work in which they are most likely to be employed. The term industrial education is recommended in preference to industrial arts or vocational education because the purpose is not limited to general education or preparation for gainful employment but includes both.

Under Whose Auspices Should the New Institution Be Estab-

lished? As previously stated, this would be a school established for the purpose of meeting the needs of Negro youth that are not being met adequately by the public or vocational schools in the state of Oklahoma. The state has the power to tax and is able financially to support a school of this nature more than any other organization. Furthermore, when schools are state controlled there is a tendency for them to be more democratic.

Location. If this school is to be supervised by the state, the two places it would more likely be located are:

1. Langston University, Langston, Oklahoma, which is centrally located and where a number of facilities could be made available for the teaching of students from the existing Industrial Arts and Vocational Education Departments.

2. The Oklahoma State Fair Park in Oklahoma City would be suitable as an ideal place for the location for this type of school because most of the buildings are state-owned and are used only a short period of time during the year.

Relationship To Trade and Industrial Schools. From Table II on page 16, it can be seen that Negroes are engaged in various types of work. Many of them are employed as porters, caretakers, car washers and many other jobs that are not considered trades but are essential. The school should offer training to prepare persons to enter a gainful trade or industrial pursuit. It should not be limited to a said number of trades in which the students would find few chances of employment upon completion of such training.

Relationship To Elementary and Secondary Schools. The purpose of elementary and secondary schools is to provide the students with a general education. It focuses attention upon knowledge, skill and attitudes that are held to be useful for successful living without special reference or application to particular occupations or calling.

Industrial education deals with knowledge, skills and attitudes that prepare an individual wholly or in part for a definite occupation or vocational pursuit which equips him for successful living. General education should precede industrial education. Emphasis should not be placed on diplomas or degrees in the industrial education school.

Determining the Course of Study. Investigation and research should be pursued which would reveal the type of work in which most of the Negroes in the prescribed category are usually employed and the course of study developed upon these findings. This is especially true where it is impossible for the student to secure experience in the job until he is employed, for example, janitorial service and filling station attendants. The course of study should be designed so as to fulfill the objectives of industrial education as listed on page 22.

> The subject matter of all industrial courses is composed of trade skills and related technical information. This subject matter is based upon occupational analysis, either in terms of jobs or processes or unit operations.[1]

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[1]John F. Friese, Course Making in Industrial Education, page 109.

This program should be flexible enough to provide the students with various amounts of experience, especially the students that desire to take the handy-man courses.

Qualification of Teachers. Teachers of industrial education should be qualified the same as teachers in the public schools. For many courses that should be taught in an industrial education school of this nature it might be difficult to obtain teachers with academic training and experience. The minimum qualifications should be comparable to the qualifications of teachers of vocational education that are federally reimbursed.

Conclusion. In order to establish an industrial school for Negroes in the state of Oklahoma the issues previously stated should be considered. The aims or purposes of the school should be made clear to all concerned. Means to supervise and finance a program of this type would require planning and study.

CHAPTER VI

A PROPOSED INDUSTRIAL EDUCATION SCHOOL PROGRAM FOR NEGROES IN OKLAHOMA

In this chapter a proposed program of activities for an Industrial Education school shall be considered. The type of training included in this program will be determined by local conditions, by the writer's personal experiences and by data obtained from the survey.

In formulating this program it is to be remembered that one of the purposes of this school is to provide industrial training for Negroes in the state of Oklahoma in the type of work they are most likely to seek employment. It is considered as one of the means of providing life adjustment education for Negro youth in the state of Oklahoma.

The Courses of Study. The course of study is designed to be used as a progress chart. When the student has completed one assignment it will be presented for the approval of the instructor. The instructor will evaluate the student's progress by placing a check in the space provided at the right of the course outline. The course of study is designed to enable both student and instructor to determine and direct the studen's progress at all times. These courses of study are presented in outline form in this report.

Proposed Program for a Service Station Attendant. Service station work and responsibilities vary according to type and location of the business. Stations specializing in ser-

vicing large trucks would require different equipment and service than one catering primarily to passenger cars but a program designed to teach students the basic fundamentals of service station work could be most helpful in any type of station.

Importance of the Service Station. Service stations are built and equipped to take care of American's many millions of automobiles. From these stations the motoring public not only obtains its basic need of gasoline and oil but in addition gets the all important periodic check-up of the car.

> America is a nation on wheels. Even today, private cars carry eighty per cent of employed people to their jobs every day. This situation, therefore, makes the service station extremely important, not only as a place to buy gasoline and oil, but as a service center for car maintenance.[1]

The service station business has many advantages for young men and women interested in working for themselves or securing steady employment in the service station business.

The Negro Employee in the Service Station. Results of the survey show that in the state of Oklahoma most Negroes employed in service stations are employed as car washers, lubrication technicians and tire repairmen. Often the Negro employees service the customer, charge batteries, render road service and all of the other jobs that are performed by other employees. The survey also shows that most employers would

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[1]Service Station Retailing, page 11.

not object to hiring or advancing Negro employees to more skilled or technical jobs if they are trained to do the job.

Course of Study for the Service Station Worker. Service for automobiles is perhaps a necessity more than for any other machine. For this reason it is important that training for service station attendants be provided. One cannot expect the service station attendant to be a skilled automobile mechanic but he should be able to render service that is often rendered at service stations and have a fair knowledge of all phases of automobile mechanics. The list of learning units given here is a list of the services and reapirs that a service station attendant should be able to do.

A. Things Service Station Employees Should Learn to Do.

1. Plan the procedure in doing a job. . . . . _____
2. Keep service records on customers automobiles . . . . . _____
3. How the gasoline pump works. . . . . _____
4. Clean gasoline lines . . . . . _____
5. How to wash a car. . . . . _____
6. How to clean and protect the various types of automobile upholstery. . . . . _____
7. How to polish a car. . . . . _____
8. How to wax a car . . . . . _____
9. Clean automobile parts and assessories with bench grinder and buffer . . . . . _____
10. Retouch scratches or damages to the finish. . . . . _____
11. Replace float in carburetor. . . . . _____
12. Clean and adjust the carburetor. . . . . _____
13. Test, remove and replace fuel pumps. . . . . _____
14. Remove and replace oil filters . . . . . _____
15. Draw and flush crank case. . . . . _____
16. Change and refill gear lubricant in transmission. . . . . _____
17. Lubricate automobile chassis . . . . . _____
18. Change and refill gear lubricant in differential. . . . . _____
19. Grease universal joints. . . . . _____
20. Change oil in steering gear. . . . . _____
21. Refill shock absorbers . . . . . _____

22. Add hydraulic brake lubricant. . . . . ____
23. Lubricate water pumps. . . . . ____
24. Inspect and replace front wheel bearings . . . ____
25. Disassemble and assemble automible tires . . . ____
26. Patch a tire tube. . . . . ____
27. Insert a boot in a casing. . . . . ____
28. Inspect and adjust clutch. . . . . ____
29. Inspect and adjust differential. . . . . ____
30. Adjust and install hydraulic brakes. . . . . ____
31. Adjust and install mechanical brakes . . . . . ____
32. Locate and repair a short or open circuit. . . ____
33. Trace and test the ignition circuit. . . . . ____
34. Test and clean spark-plugs . . . . . ____
35. Clean and adjust breaker points. . . . . ____
36. Test and replace condensor . . . . . ____
37. Test and care for the battery. . . . . ____
38. Test and replace an ignition coil. . . . . ____
39. Test and repair generators . . . . . ____
40. Adjust tension on a fan or generator belt. . . ____
41. Test generator regulators. . . . . ____
42. Replace and test switches and gauges . . . . . ____
43. How to use an automobile analyzer. . . . . ____
44. Trace electric circuit from generator to battery. . . . . ____
45. Trace and test the ignition system . . . . . ____
46. Replace light bulbs. . . . . ____
47. Adjust, focus and test lights. . . . . ____
48. Trace and test the light system. . . . . ____
49. Test for and correct lost motion in steering mechanism . . . . . ____
50. Extract a broken stud and tapping in threads . . . . . ____
51. Disassemble and check a water pump . . . . . ____
52. Replace radiator water hose. . . . . ____
53. Remove sediment from the radiator. . . . . ____
54. Align front wheels . . . . . ____
55. How to balance wheels. . . . . ____
56. Recondition front ends . . . . . ____
57. Adjust valve clearance in L-head and valve-in head engines. . . . . ____

B. Things the Service Station Employee Should Know.

1. What products, supplies and services are more in demand during the different seasons of the year. . . . . ____
2. The sales that realize the most net profit . . ____
3. The importance of station maintenance and appearance . . . . . ____
4. The need for establishing good work habits . . ____
5. How to care for and use hand tools and equipment . . . . . ____
6. Psychology of service station selling. . . . . ____
7. How to meet objections and complaints. . . . . ____

8. Procedure for servicing customers' cars in the driveway. . . . . ____
9. Tools and materials required in service station operation . . . . . ____
10. Fire hazards and safety measures pertaining to the service station. . . . . ____
11. Importance of the service station employee in holding customers. . . . . ____
12. Facts about the manufacture of gasoline . . . . ____
13. The importance of lubrication and the type of lubricant for the various automotive parts . . . . . ____
14. Types and uses of anti-friction bearings. . . . ____
15. What is meant by caster, camber and toe-in and how they affect car operation . . . . . ____
16. The different types of brakes and axles . . . . ____
17. How the gear-shift transmission works . . . . . ____
18. How the automatic transmission works. . . . . ____
19. The principles of the four stroke cycle engine. . . . . ____
20. What jobs the service station employee should perform under normal conditions . . . . . ____

Course of Study in Janitorial Service. The janitor fills an important place in the upkeep and daily routines that are conducted on most premises. The janitor is the caretaker, the engineer and the man behind the scenes. Viles states that:

> The most efficient janitor is one who does his tasks in such a manner that the work of school moves smoothly without the occupants of the building realizing who is responsible for their physical comfort.[2]

The results of the survey made in this report show that many Negroes are employed as janitors. Many are employed in large firms and public buildings on full time bases where as others render janitorial service in connection with other duties in small establishments. With the invention of many new supplies, equipment and materials the trained janitor can

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[2]N. E. Viles, The School Janitor, page 3.

save valuable time but these new inventions have also created a need for an industrial education school that will provide this training. The industrial education school should strive to give direct and purposeful experience to the students desiring janitorial training.

A. Things Janitors Should Learn to Do.

1. Plan a procedure for doing daily tasks. . . . _____
2. Dust and care for expensive furniture . . . . _____
3. Clean and care for wood floors. . . . . _____
4. Clean and care for masonry floors . . . . . _____
5. Clean and care for composition floors . . . . _____
6. How to sweep auditorium with seats. . . . . _____
7. How to polish and protect hardware on doors and furniture . . . . . _____
8. Clean and shine windows and other glass objects . . . . . _____
9. Check and repair door locks . . . . . _____
10. Mop and clean toilet room floors. . . . . _____
11. Clean toilet bowls, seats and metal fittings. . . . . _____
12. Clean and care for drinking fountains . . . . _____
13. Clean closed lamp shades. . . . . _____
14. Repair an extension cord. . . . . _____
15. How to check and control room temperature . . _____
16. Repair playground equipment . . . . . _____
17. How to hang, repair and regulate window curtains . . . . . _____
18. How to assemble a mop head. . . . . _____
19. Repair a leaky faucet . . . . . _____
20. Check and make minor repairs on electric scrubbing and polishing machine . . . . . _____
21. How to operate a vacuum cleaner . . . . . _____
22. Wax different type floors . . . . . _____
23. Check and care for fire extinguishers . . . . _____
24. Check and care for fire escape devices. . . . _____
25. Repair and refill soap dispensers . . . . . _____
26. Repair and refill tissue dispensers . . . . . _____
27. Read a working drawing. . . . . _____
28. Measure and divide space with a rule. . . . . _____
29. Drill holes in wood . . . . . _____
30. Drill holes in cement . . . . . _____
31. Drive and draw nails. . . . . _____
32. Apply stains, wax and enamel. . . . . _____
33. Test and replace fuses. . . . . _____
34. Attach a cord to a lamp socket. . . . . _____
35. Tie an underwriter's knot . . . . . _____
36. Remove an old finish on furniture . . . . . _____
37. How to apply kalsomine. . . . . _____

38. Plan and install electric devices in a circuit in series and in parallel . . . . ____
39. Lubricate fans and other electrical appliances. . . . . ____
40. How to repair and hang screens. . . . . ____
41. How to repair small holes in plaster. . . . . ____
42. Fill cracks and holes in floors . . . . . ____

B. Things the Janitor Should Know.

1. The importance of being properly and neatly dressed . . . . . ____
2. To pay prompt attention to minor repairs which may prevent expensive ones later. . ____
3. That the janitor's relationship with others should be courteous and cooperative . . . . . ____
4. Name and place to purchase janitorial supplies. . . . . ____
5. How to take an inventory. . . . . ____
6. How to heat, light and ventilate a room properly . . . . . ____
7. The proper tools to use to do the job . . . . ____
8. Various washing powders and chemicals to use for maintaining sanitary conditions . ____
9. The importance of the janitor's work. . . . . ____
10. The use and types of various fire extinguishers . . . . . ____
11. The tasks that should be done daily, weekly, biweekly, monthly and etc.. . . . ____
12. How to make a hasty inspection of the building. . . . . ____
13. The importance of keeping records on supplies and equipment. . . . . ____
14. That the janitor is responsible for the safety and physical comfort of other members of the organization . . . . . ____
15. That major repairs on expensive equipment should be done by a specialist. . . . . ____

Proposed Program for Home Mechanics. Home mechanics is offered in some public schools either in the division of industrial arts or the division of home economics. When offered in public school the objectives of Home Mechanics are as follows:

1. To give consumer knowledge about the selection and efficient use of the products of industry that are a part of home living.

2. To develop handy-man abilities.
3. To teach the use of handicraft for leisure time.
4. To further the social objectives of general education.[3]

The above objectives are considered to be a phase of general education and not to prepare pupils for gainful employment.

The Need for Home Mechanics in an Industrial School for Negroes. As indicated in Table II, page 16, 1387 Negro males and 11,231 females were engaged in domestic work in 1940 in the state of Oklahoma. The Table also indicated that more Negroes were employed in domestic work than in any other line of work. It is the opinion of the writer that if people are going to be employed in a phase of work there should be some means of training them to qualify for this employment.

Course of Study in Home Mechanics. In addition to the objectives listed previously in Home Mechanics, one more should be added. The objective should be "to aid people in qualifying for domestic work." Since the purpose of the public school is to provide students with a general education, Home Mechanics could probably be taught better in an industrial education school. The following list of things the domestic worker should learn to do is based on a study made by Brown[4] of jobs actually done by housewives.

A. Things Domestic Workers Should Learn To Do.

1. How to sharpen a knife. . . . . ____

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[3]William H. Johnson and Louis V. Newkirk, Home Mechanics, page v.

[4]Ray E. Brown, Home Mechanics for Girls.

2. Lubricate a sewing machine. . . . . ____
3. How to varnish furniture. . . . . ____
4. How to polish a floor . . . . . ____
5. Paint woodwork and furniture. . . . . ____
6. Clean and polish furniture. . . . . ____
7. Lubricate washing machine . . . . . ____
8. Install an electric fuse. . . . . ____
9. Lubricate small electric appliances . . . . . ____
10. Remove scratches from furniture . . . . . ____
11. Repair an electric extension cord . . . . . ____
12. Paint interior walls. . . . . ____
13. Sharpen a pair of scissors. . . . . ____
14. Repair a screen door. . . . . ____
15. Make stakes for garden or flowers . . . . . ____
16. Adjust and clean burner oven gas stove. . . . ____
17. Upholster chair seats . . . . . ____
18. Varnish linoleum. . . . . ____
19. Replace loose joints in furniture . . . . . ____
20. Remove old finish on furniture. . . . . ____
21. Repair a garden hose. . . . . ____
22. Replace handles in hoes, rakes, shovels and etc.. . . . . ____
23. Solder pans, buckets, tubs and etc. . . . . ____
24. Repair drawers in furniture . . . . . ____
25. Replace washers in faucets. . . . . ____
26. Apply kalosmine . . . . . ____
27. Repair an electric iron . . . . . ____
28. Fill holes and cracks in floors . . . . . ____
29. Put in a window pane. . . . . ____
30. Make a house plan . . . . . ____
31. Make a simple furniture drawing . . . . . ____
32. Adjust a lawn mower . . . . . ____
33. Clean and adjust door locks . . . . . ____
34. Replace fuse in electric percolator . . . . . ____
35. Put a new valve in a gas stove. . . . . ____
36. Make knife and fork box . . . . . ____
37. Adjust a refrigerator . . . . . ____
38. Clean an electric motor . . . . . ____
39. Replace door hinges . . . . . ____
40. Paint porch floor and ceiling . . . . . ____

B. Things Domestic Workers Should Know.

1. Kinds of fuses and their uses . . . . . ____
2. How the electric meter works. . . . . ____
3. Safety rules in working with electric appliances. . . . . ____
4. How to identify different kinds of metals . . ____
5. How to identify different kinds of wood . . . ____
6. Kinds of finish in common use such as stain, oil, wax, shellac, varnish, enamel and paint . . . . . ____
7. Types of locks and where used . . . . . ____

8. How to paper a room to make it look larger or smaller . . . . . ____
9. The principles of refrigeration . . . . . ____
10. How to light a gas stove safely . . . . . ____
11. How to sharpen knives . . . . . ____
12. How to hang pictures. . . . . ____
13. The proper care of appliances made from different kinds of materials. . . . . ____

Course of Study in Woodwork. A course of study in woodwork was proposed because more Negroes were employed in one organization of this nature than in any other one organization. The course of study is based on the answers employers gave to the question, "What jobs would you like for your employees to learn in school?"

A. Things Woodworkers Should Learn To Do.

1. Plan the procedure in doing the job . . . . . ____
2. Make out a bill of material . . . . . ____
3. Check materials when received . . . . . ____
4. Read a working drawing. . . . . ____
5. Measure and divide spaces with a rule . . . . ____
6. Gauge with pencil and with marking gauge. . . ____
7. Lay out a pattern on stock. . . . . ____
8. Transfer a design . . . . . ____
9. Make a butt-joint . . . . . ____
10. Apply filler and shellac. . . . . ____
11. Clean and care for stain and shellac brushes . . . . . ____
12. Apply stain, wax and enamel . . . . . ____
13. Hold stock with handscrews and clamps . . . . ____
14. Lay out an octagon and chamfer. . . . . ____
15. Round or form work with a spokeshave. . . . . ____
16. Lay out and test cuts with a sliding T-bevel . . . . . ____
17. Shape ends, edges and curves with wood file . ____
18. Drive and draw nails. . . . . ____
19. Set a nail and brad . . . . . ____
20. Smooth surfaces with chisel and with scraper . . . . . ____
21. Trim or pare with a chisel. . . . . ____
22. Fasten with screws. . . . . ____
23. Bore holes with an auger-bit. . . . . ____
24. Counter sink holes. . . . . ____
25. Bore holes with a auger-bit in wood . . . . . ____
26. Round edges . . . . . ____
27. Plane a surface true and plane an end grain . ____

28. Test for squareness with the try-square . . . ____
29. Lay out square cuts with the try-square . . . ____
30. Sharpen woodwork hand tools . . . . . ____
31. Keep tools free from rust . . . . . ____
32. Adjust a jack-plane . . . . . ____
33. Apply stain and varnish . . . . . ____
34. Cut curves with a compass saw . . . . . ____
35. Prepare glue. . . . . ____
36. Glue up work. . . . . ____
37. Clean and care for paint brushes. . . . . ____
38. Lay out and cut a dado and a cross-lap joint . . . . . ____
39. Cut a groove and rabbit joint . . . . . ____
40. Lay out and cut tapers. . . . . ____
41. Do upholstering . . . . . ____
42. Set and use an expansive-bit. . . . . ____
43. Lay out an ellipse. . . . . ____
44. Put on locks and drawer pulls . . . . . ____
45. Put on hinges and ball-catches. . . . . ____
46. Apply lacquer . . . . . ____
47. Apply finish with a spray gun . . . . . ____
48. Clean and care for a spray gun. . . . . ____
49. Lay out and cut a housed joint. . . . . ____
50. Lay out and cut a blind mortise-and tenon joint . . . . . ____
51. Lay out and cut a miter joint . . . . . ____
52. Construct a panel . . . . . ____
53. Make a splined joint. . . . . ____
54. Make a drawer-slide . . . . . ____
55. Fasten on a table top . . . . . ____
56. Fasten with lag-screws. . . . . ____
57. Cut and edge mold . . . . . ____
58. Lay out and cut a haunched mortise-and tenon joint . . . . . ____
59. Give a fumed-oak finish . . . . . ____
60. Do simple upholstery that involves use of springs. . . . . ____
61. Do simple upholstery that involves webbing and rolled edges. . . . . ____
62. Prepare wood surfaces for finishing . . . . . ____
63. Operate a circular saw. . . . . ____
64. Operate a band and jig-saw. . . . . ____
65. Operate a wood lathe. . . . . ____
66. Operate a belt and disc sander. . . . . ____
67. Operate a wood drill. . . . . ____

B. Things Woodworkers Should Know.

1. How lumber is dried, effect of moisture . . . ____
2. Identify the different kinds of lumber. . . . ____
3. The principal characteristics of lumber, the working qualities, principal uses and the source of supply. . . . . ____
4. Methods of cutting and milling lumber . . . . ____

5. Standard dimensions of lumber and how classified. . . . . ____
6. Opportunities and requirements in carpentry and other woodworking trades . . . ____
7. Kinds of grinding and sharpening stones, their grades and uses . . . . . ____
8. Special types of fitting. . . . . ____
9. Types of locks and where used . . . . . ____
10. Types of latches and where used . . . . . ____
11. The locations of important manufacturing concerns. . . . . ____
12. The division of labor . . . . . ____
13. The use of automatic machinery. . . . . ____
14. Types of joints, where used and why . . . . . ____
15. Types of hinges and where used. . . . . ____
16. Rules of good furniture design. . . . . ____
17. Grades to use of steel wool . . . . . ____
18. Kinds, grades and principal use of sand paper. . . . . ____
19. How sizes and kinds of screws are indicated . ____
20. Kinds of screws and their use . . . . . ____
21. Kinds of nails and their use. . . . . ____
22. Size and how nails are sold . . . . . ____
23. Kinds of glue . . . . . ____
24. Preparation of glue . . . . . ____
25. Safety measures in operating woodworking machinery . . . . . ____
26. How veneers and plywood are made, their use . ____

Course of Study in Automobile Body and Fender Repair and Painting. The objective of this course of study is to assist the student in learning enough technical and related information to acquire sufficient manipulative skills to become employable as a beginning journeyman.

A. Things Automobile Paint and Body Repairmen Should Learn To Do.

1. Plan a procedure for doing the job. . . . . ____
2. Name parts and use of acetylene welding equipment . . . . . ____
3. How to install acetylene equipment. . . . . ____
4. Name parts and use of electric welding equipment . . . . . ____
5. How to prepare electric welding equipment for operation . . . . . ____
6. Regulate valves for lighting torch on acetylene welding . . . . . ____

7. Regulate valves for cutting metals. . . . . ____
8. Regulate valves for cutting flames. . . . . ____
9. Test and fix leaks in oxyacetylene welding equipment . . . . . ____
10. How to braze metals . . . . . ____
11. How to rough out fenders. . . . . ____
12. Remove wheels from automobiles. . . . . ____
13. Line up reinforcements. . . . . ____
14. Reshape fender brackets . . . . . ____
15. Weld broken places in fender. . . . . ____
16. Bump out dents. . . . . ____
17. Shrink stretched metal. . . . . ____
18. Stretch metal . . . . . ____
19. Estimate time on labor and material . . . . . ____
20. How to remove finders from automobiles. . . . ____
21. Remove paint from fender. . . . . ____
22. Fill in with body solder and putty. . . . . ____
23. How to file and sand metal. . . . . ____
24. Remove floor mats . . . . . ____
25. Reshape bumper brackets . . . . . ____
26. Straighten running boards . . . . . ____
27. Install new running boards. . . . . ____
28. Cold straighten bumpers with bending bars . . ____
29. How to inspect for bent frame . . . . . ____
30. Inspect for bent axle . . . . . ____
31. Rough out doors . . . . . ____
32. Remove doors from car . . . . . ____
33. Remove garnish molding from doors . . . . . ____
34. Remove hardware from doors. . . . . ____
35. Remove upholstering from doors. . . . . ____
36. Remove glass and glass channels . . . . . ____
37. How to press out panels . . . . . ____
38. Hammer out rough spots. . . . . ____
39. How to re-assemble doors. . . . . ____
40. Straighten and finish wheel housings. . . . . ____
41. Remove and replace cowl panel . . . . . ____
42. Hammer metal smooth . . . . . ____
43. Repair radiator shell and grill . . . . . ____
44. Line up automobile bodies . . . . . ____
45. Straighten and repair hoods . . . . . ____
46. Repair turret tops. . . . . ____
47. How to mix and match paint. . . . . ____
48. How to mask a car for painting. . . . . ____
49. How to apply primer coating . . . . . ____
50. How to sand primer coating. . . . . ____
51. How to paint with spray gun . . . . . ____
52. Apply lacquer finish. . . . . ____
53. Apply enamel finish . . . . . ____
54. Rub out and polish automobile finish. . . . . ____
55. Wax automobile. . . . . ____
56. Install accessories on automobile . . . . . ____

B. Things Automobile Paint and Body Repairmen Should Know.

1. Safety instruction in welding . . . . . _____
2. How to care for welding equipment . . . . . _____
3. Melting temperature of various welds. . . . . _____
4. Type of flux to use for various welds . . . . _____
5. Type of flux to use in brazing. . . . . _____
6. How to remove paint with chemicals. . . . . _____
7. Types and use of sandpaper. . . . . _____
8. Name and use of tools for hammering out dents in automobile bodies and fenders. . _____
9. How to wire up automobile accessories . . . . _____
10. What metals to braze and what metals to weld. _____
11. How to cold roll metal. . . . . _____
12. How to hot roll metal . . . . . _____
13. Various types of body solder and putty. . . . _____
14. How to clean upholstering . . . . . _____
15. The amount and kind of thinner or reducer
16. to use in various paints. . . . . _____

Course of Study in Shoe Repair. The course of study in shoe repair is proposed to aid many Negroes who are employed as "shine boys" as well as persons who are interested in this type of training. Often small shops have only one shoe repairman and one shoe shine employee. If the shoe shine employee had a knowledge of repairing shoes he could engage in this type of work when there were no customers who wanted shoe shines.

A. Things Shoe Shop Employees Should Learn To Do.

1. Replace whole rubber heels. . . . . _____
2. Replace half rubber heels . . . . . _____
3. Replace spring rubber heels . . . . . _____
4. Repalce orthopedic, cuban and combination rubber heels. . . . . _____
5. How to base leather heels . . . . . _____
6. Rebuild leather heels . . . . . _____
7. Remove and replace wood heels . . . . . _____
8. Remove old soles. . . . . _____
9. Make a pattern for replacing soles. . . . . _____
10. How to repair welts . . . . . _____
11. Repair holes in in-soles. . . . . _____
12. How to remove stitches. . . . . _____
13. Replace shanks. . . . . _____
14. Replace fillers . . . . . _____
15. How to make a skive joint . . . . . _____
16. Cement leather soles. . . . . _____

17. How to scour bottoms. . . . . ____
18. How to set edges. . . . . ____
19. How to finish bottoms . . . . . ____
20. Cover wooden heels. . . . . ____
21. Cement soles on shoes . . . . . ____
22. How to sew a rip. . . . . ____
23. How to stretch a shoe . . . . . ____
24. Attach heel plates. . . . . ____
25. How to operate shoe repair machinery. . . . . ____
26. How to blend colors . . . . . ____
27. Replace counters. . . . . ____
28. Replace linings . . . . . ____
29. Replace uppers. . . . . ____
30. Stitch shoe soles . . . . . ____
31. Clean and polish shoes. . . . . ____
32. Disassemble and assemble true and imitation moccasin. . . . . ____
33. Replace whole soles on shoes. . . . . ____
34. Replace half soles with cement. . . . . ____
35. Patch shoes with cement . . . . . ____
36. Patch shoe vamps. . . . . ____
37. Patch greasy uppers . . . . . ____
38. Thread stitching machine. . . . . ____
39. Polish two tone shoes . . . . . ____
40. Dye shoes with brush and spray gun. . . . . ____
41. Lace and tis shoe strings . . . . . ____
42. Sharpen and use hand tools. . . . . ____

B. Things Shoe Shop Employees Should Know.

1. The various shoe supplies and their uses. . . ____
2. How to plan a procedure for doing a job . . . ____
3. Requirements for all type shoe construction . ____
4. Disassemble and assemble common type shoe construction. . . . . ____
5. Maintain and operate power machinery. . . . . ____
6. Safety rules in the shoe shop . . . . . ____
7. Judge and appraise jobs . . . . . ____
8. How to buy material and supplies. . . . . ____
9. How to help customers select proper repair work . . . . . ____
10. How to build and care for a shine . . . . . ____
11. How to clean and polish various kinds of shoes . . . . . ____
12. How to sell and display shoes . . . . . ____
13. Keep pace with the latest developments. . . . ____
14. Estimate the cost of labor, materials, supplies and etc. . . . . ____
15. How to manage the shop. . . . . ____

Conclusion: In this chapter is found a proposed program for the types of training that could be started immedi-

ately to help Negroes qualify for the type of work in which the majority of them are employed. Even though a limited program was proposed for six courses, it is not the intention of the writer to convey the idea that Negroes should be trained in these courses only or that an industrial education school for Negroes should only offer these courses. The previously listed courses are a need at the present time and should be among the first to be given consideration.

CHAPTER VII

SUGGESTED EQUIPMENT, TEXTBOOKS AND REFERENCE BOOKS

Quite often a shop cannot be maintained at maximum efficiency due to the lack of tools or equipment. The diversified activities of an industrial education school necessitates a wide variety of tools, but in no great quantities. In this chapter the suggested tools, equipment and references are listed.

Equipment, Supplies and Accessories Needed for Service Stations. The service station attendant should know how to operate service station equipment along with buying and selling supplies. A number of stations sell and install automobile accessories. The following list will include tools, equipment, supplies and accessories with which the student should get experience. A selected list of textbooks and reference books are also included.

EQUIPMENT AND SUPPLIES

Air compressor
Anvil - Number 100 or 125
Armature growler and tester
Automobile bulbs and lamps
Battery cables
Battery equipment complete unit
Bench wood with vise
Brake adjusting stand
Brake band lining machine
Cans - gas safety, five gallons
Cans waste
Carburetors
Car polishers, waxes, and cleaning compounds
Combination square
Cooling system thermostats
Creepers
Distributors

Drill - electrical portable ½"
Fabric cleaner
Fan belts
First Aid cabinet and supplies
Floor mats
Floor wax
Fuel pumps
Furniture polish
Fuses
Gauge air pressure
Gauge thickness
Generators
Glass cleaner
Glass cutter
Goggles - pair
Grease gun - plain
Grease gun pressure
Grinder 8" with motor
Household oil
Ignition cables
Insecticides
Jacks - floor roller
Kerosene
Lamps, extension with shields
Mufflers and tail pipe
Naptha
Oil cans - 1/3 pint
Oil filters
Pliers, combination
Pliers, flat nose
Pliers, round nose
Pullers, gear
Pullers, wheel hub type
Putty knives
Radiator and heater hose
Radiator and heater hose
Radiator anti-freeze
Radiator cleaning and sealing compounds
Radiator covers and screens
Radiator fill caps
Seat covers
Shock absorbers
Spark plugs
Spot remover
Spray painting unit
Starter drives
Tire chains
Tool kits
Trade-in replacement parts
Traffic appliances
Voltage regulators
Vulcanizing - electric steam for tube work.
Welding unit complete
Wheel alignment - gauge
Wheel alignment - test table

Wheel bearings and grease retainers
Winshield wipers

BOOKS ON SERVICE STATION RETAILING

Automobile Facts and Figures, Automobile Manufacturers Association, monthly.

Automobiles - Painting, Fisher Body Corporation, Detroit, 1950, 30 pages.

Auto Lubrication, Society of Auto Engineers, New York: Special Publications Department, Society of Automotive Engineers, 1944.

Crouse, William H., Automotive Mechanics, New York: McGraw-Hill Book Company, 1946, 673 pages.

Service Man's Guide to Automotive Lubrication, Chicago, Illinois: The Check Chart Corporation.

Service Station Retailing, Shell Oil Company, Incorporated, 1946, 202 pages.

Toboldt, William K., Automobile Body Rebuilding and Refinishing, Scranton, Pennsylvania: International Textbook Company 1950, 464 pages.

Tools and Equipment for the Janitor. A course in janitorial service should provide students with the type of experiences they are going to receive when they become engaged in this type of labor. This list consists of the number of tools, supplies and equipment with which students should become familiar while taking a course in janitorial service.

TOOLS, EQUIPMENT AND SUPPLIES

Boiler room tools
Chamois skin
Cleaning cloths
Cleaning compounds
Cockroach exterminators
Concrete floor hardeners
Counter brush
Deodorants
Disinfectants
Drain pipe cleaner

Dust box
Dust pan
Electric scrubbing and polishing machine
Extension ladder
Force cup or "plumber's friend"
Floor brushes
Floor mop treatment
Floor squeeze
Furniture polish
Galvanized metal pail
Ink spot remover
Lamb's wool applicator
Lawn and playground tools
Liquid wax
Long - handled deck scrubbing brush
Metal bushel basket
Miscellaneous small tools
Mop box
Mop brushes
Mop heads
Mop holders
Mop pail and carriage
Mop wringer
Paint scraper
Penetrating preservation for wood floors
Pocket tools
Radiator brush
Safety step ladder
Sanitary duster
Scouring powder
Scrubbing compound
Small scrubbing brush
Soft soap
Special no-rinse cleaner
Sponge
Spray gun
Synthetic detergents
Toilet bowl brush
Toilet bowl cleaner
Vacuum cleaner
Varnish remover
Wastepaper container
Window cleaning platform

BOOKS ON JANITORIAL SERVICE

Broady, Knute O., Ireland, Clifford J., and Miller, E. Lyle, A Handbook For School Custodians, Educational Monographs, No. 4, University of Nebraska Bulletin 105, Lincoln, Nebraska, 1934.

Lee, John J., "Janitorial Man-Power in a High School Building", American School Board Journal, 83:56, December, 1931.

Lee John J., "Janitor-Service and Care of School Buildings," High School Quarterly, 17:42-45, October, 1928.

Mahone, Leslie W., Keeping the Schoolhouse Clean, Iowa State College of Agriculture and Mechanical Arts, Vol. XXXI, No. 11, Ames, Iowa, 1932.

Martin, Ray L., Hunsdon, N. S., and Shaver, Charles N., Instructors' Manual for Training Public School Janitors and Janitor Engineers, State Board of Vocational Education, Bulletin No. 305, Austin, Texas.

Moskowitz, David R., Janitor Custodian, New York: Arco Publishing Company, 1935, 50 pages.

Newman, Robert George, Janitor Service in Small Libraries, 1938.

Williams, Frank, School House Keeping, Nashville, Tennessee: George Peabody College, 1940, 16 pages.

Equipment and Supplies in Home Mechanics. The equipment and supplies listed for Home Mechanics will include a number of necessities for the home. A course in Home Mechanics should provide the student with experiences pertaining to the equipment, supplies and maintenance of a home.

EQUIPMENT AND SUPPLIES

A hand spray
Bells and buzzer
Chairs
Cooking utensils
Cross-cut hand saw
Door, screen and cabinet locks
Dry cell
Electric appliances
Electric extension cord
Electric fan
Electric iron
Electric motor
Electric percolator
Electric stove
Electric work bench
Food Mixer
Garden hose
Glue and clamps
Grinder and stoves
Hoes, rakes and shovels
Kit hand working tools

Lawn mower
Paint remover
Refrigerator
Rip hand saws
Sandpaper and steelwool
Sewing machine
Soldering coppers
Stains and varnish
Upholstery - needle, webb stretcher, tack hammer
Varnish remover
Washing machine
Water faucet
Window frame and glass
Wire gauge

BOOKS ON HOME MECHANICS

Allen, Edith, Mechanical Devices In the Home, Peoria, Illinois: The Manual Arts Press, 1922, 251 pages.

Hall, F. F., "Practical Mechanics for Girls," Industrial Arts and Vocational Education Magazine, 38:159-160, May, 1932.

Hollenback, Ella, "Home Tinkering for Girls and Home Economics for Boys," Journal of Home Economics, 22:659, August 1930.

Preston, H. S., "Instruction in Home Mechanics and Maintenance for Girls in the Industrial Arts Shops," Industrial Education Magazine 39:32-24, January, 1937.

Selvidge, Robert W., "A Tentative Analysis of Home Mechanics", Industrial Arts and Vocational Education Magazine, 21: 69-70, February, 1932.

Equipment, Supplies and Tools Needed In Shoe Shops, The shoe shop is designed to repair, polish and care for shoes. These shoes are of various kinds, colors, materials and sizes. In order to render this service properly, workmen in shoe shops should have experience with the following list of tools, equipment and supplies.

TOOLS, EQUIPMENT AND SUPPLIES

Awls
Box for scrap material
Brads

Brushes
Buckles
Buttons
Cement
Counters
Dyes
Eyelets
Glue
Hammers
Heels
Hooks
Lasts
Leather
Leather tools
Movable racks for footware
Nails
Polishes
Power machines
Sandpaper
Saddle soap
Shine parlor
Shine rags
Shoe linings
Shoe needles
Shoe repair kit
Shoe strings
Soles
Snaps
Spray gun
Thread
Uppers
Welts

BOOKS ON SHOE REPAIR

Arey, Grace and Brooks, Hazel, Shoes, New York: Columbia University Press, 1932, 15 pages.

Krag, Henry, Shoe Repairing, Milwaukee; The Bruce Publishing Company, 1947.

Morrill, Maurice and Frederic, Webster, Repairing Footwear, Burlington: University of Vermont, 1946.

Wilcox, Ruth Turner, The Mode in Footwear, New York: C. Scribner's Sons, 1948, 190 pages.

Equipment for Body, Fender and Paint Work. The purpose of paint and body automobile shops is to repair and improve the appearance of automobiles. Since the results of improper use of tools and equipment may cause additional damage to

automobiles, persons engaged in paint and body repair work should have experience with the following list of equipment, tools and supplies.

TOOLS, EQUIPMENT AND SUPPLIES

Air Compressor
Abor press
Automobile body and fender tool kit.
Automobile polish and wax of various kinds
Benzol
Body putty
Body solder
Brushes
Curve dollies
Chains (of various size and length)
Clamps
Door bar
Electric hammer
Electric sander and buffer
Electric welding equipment
Fender files
Floor jacks
Flux
Glass (doors and windshield)
Hydraulic straighting equipment
Lacquers
Liquid cleaners and paint remover
Masking paper
Paint mixer
Panel dollies
Pigments
Power grinder
Rocker-action spoon
Sealers
Seat covers
Shine
Spoons
Spray gun
Stands
Synthetic enamels
Thinners
Top dressing
Welding equipment
Wet or dry sandpaper

BOOKS ON PAINTING, BODY AND FENDER REPAIR

General Motors Corporation, Research Laboratories Section, Technical Date Department, Detroit, Michigan, 1944, 47 pages.

Heldt, Peter Martin, The Automobile Chassis, New York, 1945, 583 pages.

Kuns, Ray F., Automobile Fundamentals, Chicago: American Technical Society, 1946, 754 pages.

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CHAPTER VIII

This study is based on the need for industrial education for Negroes in the state of Oklahoma. The information gathered from research and the questionnaire has been used to propose a beginning program for an industrial education school for Negroes in the state of Oklahoma. It is intended that this proposed program would meet the needs of Negro children that are not profiting by existing public or vocational school programs.

Conclusions Based on Returns From Survey. The establishing of an industrial education school for Negroes would be welcomed by employers and potential employers in the state of Oklahoma. Many places are in accord with such a program but do not employ Negroes. This non-employment of Negroes is accounted for in some cases because of the fear of jeopardizing their business or separate lavatory and other facilities that are not available. Other conclusions based on the survey returns are:

1. More Negroes are employed as common laborer workers than skill and technical workers.
2. Most Negroes in the state of Oklahoma are not required to fill out an application when seeking employment.
3. Most places have no form of training for employees.
4. Most new employees are trained by pick-up methods.
5. More Negroes could secure employment in skilled and technical jobs if they were trained.

6. Employers would be willing to start new employees at a higher salary if they are trained.

Conclusions Based on Interviews. In addition to the above conclusions the writer found from interviews that the employee appears to have better work habits and work pride, when he has had some form of training for that job. The employees like to let it be known that they went to school to learn the job.

From interviews with employers the writer found that many large firms that do not object to employing or advancing Negroes to the more skilled jobs but because of customs or tradition they had never given this thought any consideration. Some places of employment are not as interested in employees knowing the job as they are in them having good work habits and being honest.

Recommendations. In establishing an industrial education school for Negroes in the state of Oklahoma, many issues occured to the writer. Some of these were discussed in Chapter V and many other needed features occured in planning a program for this school that were impossible for a number of reasons to include in the present program. Rather, they are presented as recommendations which would add to the establishing of a school and planning a program for Negroes in the state of Oklahoma. These recommendations are as follows:

1. That one Industrial Education school be established in the state of Oklahoma in preference to a number of community schools.

2. That further studies be made in order to broaden the program to meet the needs of the majority of Negroes in the state of Oklahoma. This would provide: (1) better recommendations for students seeking employment, and (2) a greater force to call to the attention of those in authority, the need for the state to provide employment for all its youth.

APPENDICES

A. A SELECTED BIBLIOGRAPHY

B. LETTER AND QUESTIONNAIRE

APPENDIX A

A SELECTED BIBLIOGRAPHY

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APPENDIX B

LETTER AND QUESTIONNAIRE USED IN THE INQUIRY

Box 183
Langston University
Langston, Oklahoma

Dear Sir:

In accord with the requirements of the graduate school of Oklahoma Agricultural and Mechanical College, I am making a study of the need for post-high school industrial education for Negroes in the state of Oklahoma.

A study has been made by the National Commission on Life Adjustment Education which points out that sixty per cent of the highschool students drop out of school before completing the twelfth grade or discontinue their schooling after graduating from the twelfth grade. It is my aim to gather information that will justify a program that will give this sixty per cent training in the type of work in which they are most likely to be employed.

In order to complete this study I shall need information concerning the gainful employment of Negroes in Oklahoma as compared to the number of whites and other races. Without the information you can give this study will not be complete.

May I ask then, that you fill out the enclosed questionnaire and return it to me within the next few days. Your cooperation will be greatly appreciated in supplying this information and returning it in the enclosed, self-addressed and stamped return envelope.

Sincerely,

Hubert L. Parker

Approved:

C. L. Hill
Associate Professor,
Industrial Arts Education
Oklahoma A & M College

QUESTIONNAIRE FORM

For Thesis Study: The Need for Post-Highschool Industrial Education for Negroes in Oklahoma

Information: This questionnaire has been prepared to determine the need for a school to train students who have completed the twelfth grade or students who drop out of school before completing the twelfth grade.

Directions: Please study carefully the items indicated in the list below and indicate answers in the spaces at the right.

---

1. How many people do you employ? 1. _____

2. How many Negroes do you employ as
   a. Skilled Workers , , ... a. _____
   b. Technical Workers . . . . . b. _____
   c. Common Laborers , , ... c. _____
   d. Others . . . . . d. _____

3. Do you use any form of Application blank for persons seeking employment? 3. _____

4. Do you have any form of training for your employees? 4. _____

5. How are new employees trained in your company?
   a. On the job training . . . . . a. _____
   b. Apprenticeship. . . . . b. _____
   c. Pick-up method. . . . . c. _____
   d. No formal training, , ... d. _____
   e. Others. . . . . e. _____

6. Do you think Negroes need a training program in mechanical skills? 6. _____

7. What jobs would like for your employees to learn in school? 7. _____

8. Would you employ more Negroes if they were trained? 8. _____

9. Would you object to hiring more Negroes in the skilled and technical jobs? 9. _____

10. Name the jobs to which you would welcome the employment of trained Negroes? _____
    b. _____
    c. _____

11. Would you be willing to pay more for the trained employee? 11. _____

THESIS TITLE: THE NEED FOR INDUSTRIAL EDUCATION FOR NEGROES IN THE STATE OF OKLAHOMA

NAME OF AUTHOR: Hubert L. Parker

Thesis Adviser: C. L. Hill

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NAME OF TYPIST: Tollese B. Parker